



Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 30, 2014

Louie Bayless
CalPortland Company
4301 Pioneer Avenue
DuPont, WA 98327-7736

Project: Jorgensen Forge
ARI ID: YP55

Dear Mr. Bayless:

Please find enclosed the original chain of custody (COC) form and the final results for the project referenced above. Analytical Resources, Inc. (ARI) received one soil sample on June 26, 2014.

The sample was analyzed for SVOCs, SIM SVOCs, Pesticides, PCBs and total metals, as requested on the COC.

The SVOCs CCAL is out of control low for all associated FORM III "Q" flagged analytes. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The SVOCs method blank contained diethylphthalate. All associated samples that contain analyte have been flagged with a "B" flag.

The SIM SVOCs CCAL is out of control low for pentachlorophenol. All associated samples that contain analyte have been flagged with a "Q" qualifier.

There were no other anomalies associated with these samples.

QC analysis results are included for your review. A copy of this report and the supporting data will remain on file electronically with ARI. Please contact me at your convenience if you need further information.

Sincerely,


ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
(206) 695-6211
www.arilabs.com

ARI Assigned Number: 4P55	Turn-around Requested:
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ARI Client Company: _____ Phone: _____

Client Project Name:

Client Project #:

Samplers:

Date: 6-25	Ice Present? Yes
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No. of Coolers: 1 Cooler Temps: 57

Analysis Requested

Notes/Comments



Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

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Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

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Cooler Receipt Form

ARI Client: Cal Portland

COC No(s): _____ (NA)

Assigned ARI Job No: YP55

Project Name: Jorgensen Forge

Delivered by: Fed-Ex UPS Courier (Hand Delivered Other: _____)

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry)

Time: 1440

5.7

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: AV Date 6/25/14 Time: 1440

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? (Bubble Wrap) Wet Ice (Gel Packs) Baggies Foam Block Paper Other _____

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs). (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI... (NA)

Was Sample Split by ARI (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 6/25/14 Time: 1513

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

No analysis written on CoC.

By: AV Date: 6/25/14

Small Air Bubbles -2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YP55
Client: CalPortland
Project Event: N/A
Project Name: Jorgensen Forge

Sample ID	ARI	ARI	Matrix	Sample Date/Time	VTSR
	Lab ID	LIMS ID			
1. 1-4 B	YP55A	14-12631	Soil	06/25/14 10:10	06/25/14 14:40

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: 1-4 B
SAMPLE

Lab Sample ID: YP55A
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *MMW*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Sampled: 06/25/14
Date Received: 06/25/14

Date Extracted: 06/26/14
Date Analyzed: 06/27/14 16:54
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 13.0 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: 0.4%

CAS Number	Analyte	DL	LOQ	Result
118-74-1	Hexachlorobenzene	0.14	0.96	< 0.96 U
87-68-3	Hexachlorobutadiene	0.33	0.96	< 0.96 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.2%
Tetrachlorometaxylene	75.0%

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1



Sample ID: MB-062614
METHOD BLANK

Lab Sample ID: MB-062614
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/14
Date Analyzed: 06/27/14 15:46
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
118-74-1	Hexachlorobenzene	0.14	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.34	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	79.0%
Tetrachlorometaxylene	78.8%

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Client ID	DCBP	TCMX	TOT OUT
MB-062614	79.0%	78.8%	0
LCS-062614	82.2%	82.5%	0
LCSD-062614	86.0%	76.2%	0
1-4 B	79.2%	75.0%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(30-160)	(30-160)
(TCMX) = Tetrachlorometaxylene	(30-160)	(30-160)

Prep Method: SW3546
Log Number Range: 14-12631 to 14-12631

Sample ID: LCS-062614
LCS/LCSD

Lab Sample ID: LCS-062614
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Sampled: 06/25/14
Date Received: 06/25/14

Date Extracted LCS/LCSD: 06/26/14

Sample Amount LCS: 12.5 g-dry-wt
LCSD: 12.5 g-dry-wt

Date Analyzed LCS: 06/27/14 16:03
LCSD: 06/27/14 16:20

Final Extract Volume LCS: 2.5 mL
LCSD: 2.5 mL

Instrument/Analyst LCS: ECD6/YZ
LCSD: ECD6/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: Yes

Silica Gel: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Hexachlorobenzene	3.42	4.00	85.5%	3.04	4.00	76.0%	11.8%
Hexachlorobutadiene	2.82	4.00	70.5%	2.78	4.00	69.5%	1.4%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	82.2%	86.0%
Tetrachlorometaxylene	82.5%	76.2%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET

PSDDA PCB by GC/ECD

Extraction Method: SW3546

Page 1 of 1

Sample ID: 1-4 B
SAMPLE

Lab Sample ID: YP55A

LIMS ID: 14-12631

Matrix: Soil

Data Release Authorized: *mw*

Reported: 06/30/14

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Date Sampled: 06/25/14

Date Received: 06/25/14

Date Extracted: 06/26/14

Date Analyzed: 06/27/14 18:56

Instrument/Analyst: ECD5/VTs

GPC Cleanup: No

Sulfur Cleanup: Yes

Acid Cleanup: Yes

Sample Amount: 12.9 g-dry-wt

Final Extract Volume: 2.5 mL

Dilution Factor: 1.00

Silica Gel: Yes

Percent Moisture: 0.4%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.5	3.9	< 3.9 U
53469-21-9	Aroclor 1242	0.57	3.9	< 3.9 U
12672-29-6	Aroclor 1248	0.57	3.9	< 3.9 U
11097-69-1	Aroclor 1254	1.3	3.9	< 3.9 U
11096-82-5	Aroclor 1260	1.3	3.9	< 3.9 U
11104-28-2	Aroclor 1221	1.3	3.9	< 3.9 U
11141-16-5	Aroclor 1232	1.3	3.9	< 3.9 U
37324-23-5	Aroclor 1262	1.3	3.9	< 3.9 U
11100-14-4	Aroclor 1268	1.3	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	92.5%
Tetrachlorometaxylene	67.0%

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1



Sample ID: MB-062614
METHOD BLANK

Lab Sample ID: MB-062614
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/14
Date Analyzed: 06/27/14 17:35
Instrument/Analyst: ECD5/VTS
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.6	4.0	< 4.0 U
53469-21-9	Aroclor 1242	0.59	4.0	< 4.0 U
12672-29-6	Aroclor 1248	0.59	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	96.5%
Tetrachlorometaxylene	73.0%

SW8082/PCB SOIL/SOLID/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
MB-062614	96.5%	40-133	73.0%	53-120	0
LCS-062614	96.0%	40-133	71.8%	53-120	0
LCSD-062614	94.8%	40-133	70.5%	53-120	0
1-4 B	92.5%	30-133	67.0%	53-120	0

Microwave (MARS) Control Limits PCBSMM

Prep Method: SW3546

Log Number Range: 14-12631 to 14-12631

ORGANICS ANALYSIS DATA SHEET

PSDDA PCB by GC/ECD

Page 1 of 1



Sample ID: LCS-062614

LCS/LCSD

Lab Sample ID: LCS-062614

LIMS ID: 14-12631

Matrix: Soil

Data Release Authorized: *mw*

Reported: 06/30/14

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 06/26/14

Sample Amount LCS: 12.5 g-dry-wt

LCSD: 12.5 g-dry-wt

Date Analyzed LCS: 06/27/14 17:55

Final Extract Volume LCS: 2.50 mL

LCSD: 06/27/14 18:15

LCSD: 2.50 mL

Instrument/Analyst LCS: ECD5/VT

Dilution Factor LCS: 1.00

LCSD: ECD5/VT

LCSD: 1.00

GPC Cleanup: No

Silica Gel: Yes

Sulfur Cleanup: Yes

Acid Cleanup: Yes

Percent Moisture: NA

Florisil Cleanup: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Aroclor 1016	79.4	101	78.6%	79.2	101	78.4%	0.3%
Aroclor 1260	88.6	101	87.7%	87.9	101	87.0%	0.8%

PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	96.0%	94.8%
Tetrachlorometaxylene	71.8%	70.5%

Results reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS


Page 1 of 1

Sample ID: 1-4 B
SAMPLE

Lab Sample ID: YP55A

LIMS ID: 14-12631

Matrix: Soil

Data Release Authorized: 

Reported: 06/30/14

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Date Sampled: 06/25/14

Date Received: 06/25/14

Percent Total Solids: 99.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/26/14	6010C	06/27/14	7440-38-2	Arsenic	0.46	5	5	U
3050B	06/26/14	6010C	06/27/14	7440-43-9	Cadmium	0.11	0.2	0.2	U
3050B	06/26/14	6010C	06/27/14	7440-47-3	Chromium	0.27	0.5	19.5	
3050B	06/26/14	6010C	06/27/14	7440-50-8	Copper	0.050	0.2	15.1	
3050B	06/26/14	6010C	06/27/14	7439-92-1	Lead	0.13	2	2	U
CLP	06/26/14	7471A	06/26/14	7439-97-6	Mercury	0.0010	0.02	0.02	U
3050B	06/26/14	6010C	06/27/14	7440-02-0	Nickel	0.30	1	24	
3050B	06/26/14	6010C	06/27/14	7440-22-4	Silver	0.030	0.3	0.3	U
3050B	06/26/14	6010C	06/27/14	7440-66-6	Zinc	0.12	1	31	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: YP54MB

LIMS ID: 14-12630

Matrix: Soil

Data Release Authorized:

Reported: 06/30/14

QC Report No: YP54-CalPortland

Project: Jorgensen Forge

Date Sampled: NA

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/26/14	6010C	06/27/14	7440-38-2	Arsenic	0.46	5	5	U
3050B	06/26/14	6010C	06/27/14	7440-43-9	Cadmium	0.11	0.2	0.2	U
3050B	06/26/14	6010C	06/27/14	7440-47-3	Chromium	0.27	0.5	0.5	U
3050B	06/26/14	6010C	06/27/14	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	06/26/14	6010C	06/27/14	7439-92-1	Lead	0.13	2	2	U
CLP	06/26/14	7471A	06/26/14	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/26/14	6010C	06/27/14	7440-02-0	Nickel	0.30	1	1	U
3050B	06/26/14	6010C	06/27/14	7440-22-4	Silver	0.030	0.3	0.3	U
3050B	06/26/14	6010C	06/27/14	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).

U-Analyte undetected at given LOQ

LOQ-Limit of Quantitation

INORGANICS ANALYSIS DATA SHEET

TOTAL METALS

Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: YP54LCS

LIMS ID: 14-12630

Matrix: Soil

Data Release Authorized:

Reported: 06/30/14

QC Report No: YP54-CalPortland

Project: Jorgensen Forge

Date Sampled: NA

Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	211	200	106%	
Cadmium	6010C	51.8	50.0	104%	
Chromium	6010C	52.3	50.0	105%	
Copper	6010C	50.6	50.0	101%	
Lead	6010C	203	200	102%	
Mercury	7471A	0.56	0.50	112%	
Nickel	6010C	53	50	106%	
Silver	6010C	52.7	50.0	105%	
Zinc	6010C	52	50	104%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

Lab Sample ID: YP55A
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *WW*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge
NA
Date Sampled: 06/25/14
Date Received: 06/25/14

Date Extracted: 06/26/14
Date Analyzed: 06/27/14 18:13
Instrument/Analyst: NT10/YZ
GPC Cleanup: No

Sample Amount: 11.1 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 0.4%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	7.4	18	< 18 U
106-46-7	1,4-Dichlorobenzene	4.0	18	< 18 U
100-51-6	Benzyl Alcohol	13	18	< 18 U
95-50-1	1,2-Dichlorobenzene	4.2	18	< 18 U
95-48-7	2-Methylphenol	7.1	18	< 18 U
106-44-5	4-Methylphenol	13	18	< 18 U
105-67-9	2,4-Dimethylphenol	24	90	< 90 U
65-85-0	Benzoic Acid	53	180	< 180 U
120-82-1	1,2,4-Trichlorobenzene	5.4	18	< 18 U
91-20-3	Naphthalene	4.7	18	< 18 U
91-57-6	2-Methylnaphthalene	5.1	18	< 18 U
131-11-3	Dimethylphthalate	5.8	18	< 18 U
208-96-8	Acenaphthylene	4.3	18	< 18 U
83-32-9	Acenaphthene	4.6	18	< 18 U
132-64-9	Dibenzofuran	4.2	18	< 18 U
84-66-2	Diethylphthalate	16	18	< 18 U
86-73-7	Fluorene	4.5	18	< 18 U
86-30-6	N-Nitrosodiphenylamine	8.6	18	< 18 U
87-86-5	Pentachlorophenol	28	90	< 90 U
85-01-8	Phenanthrene	4.2	18	< 18 U
120-12-7	Anthracene	5.4	18	< 18 U
84-74-2	Di-n-Butylphthalate	4.8	18	< 18 U
206-44-0	Fluoranthene	4.1	18	< 18 U
129-00-0	Pyrene	5.0	18	< 18 U
85-68-7	Butylbenzylphthalate	7.3	18	< 18 U
56-55-3	Benzo(a)anthracene	4.7	18	< 18 U
117-81-7	bis(2-Ethylhexyl)phthalate	26	45	< 45 U
218-01-9	Chrysene	4.7	18	< 18 U
117-84-0	Di-n-Octyl phthalate	7.9	18	< 18 U
50-32-8	Benzo(a)pyrene	5.9	18	< 18 U
193-39-5	Indeno(1,2,3-cd)pyrene	5.4	18	< 18 U
53-70-3	Dibenz(a,h)anthracene	5.6	18	< 18 U
191-24-2	Benzo(g,h,i)perylene	5.3	18	< 18 U
TOTBFA	Total Benzofluoranthenes	9.2	36	< 36 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	67.2%	2-Fluorobiphenyl	67.0%
d14-p-Terphenyl	78.2%	d4-1,2-Dichlorobenzene	63.4%
d5-Phenol	58.0%	2-Fluorophenol	59.2%
2,4,6-Tribromophenol	72.8%	d4-2-Chlorophenol	66.0%

Sample ID: MB-062614
METHOD BLANK

Lab Sample ID: MB-062614
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/14
Date Analyzed: 06/27/14 15:46
Instrument/Analyst: NT10/YZ
GPC Cleanup: No

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.2	20	< 20 U
106-46-7	1,4-Dichlorobenzene	4.4	20	< 20 U
100-51-6	Benzyl Alcohol	15	20	< 20 U
95-50-1	1,2-Dichlorobenzene	4.7	20	< 20 U
95-48-7	2-Methylphenol	7.8	20	< 20 U
106-44-5	4-Methylphenol	15	20	< 20 U
105-67-9	2,4-Dimethylphenol	27	100	< 100 U
65-85-0	Benzoic Acid	59	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	6.0	20	< 20 U
91-20-3	Naphthalene	5.2	20	< 20 U
91-57-6	2-Methylnaphthalene	5.7	20	< 20 U
131-11-3	Dimethylphthalate	6.4	20	< 20 U
208-96-8	Acenaphthylene	4.8	20	< 20 U
83-32-9	Acenaphthene	5.1	20	< 20 U
132-64-9	Dibenzofuran	4.6	20	< 20 U
84-66-2	Diethylphthalate	18	20	56
86-73-7	Fluorene	5.0	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	9.6	20	< 20 U
87-86-5	Pentachlorophenol	31	100	< 100 U
85-01-8	Phenanthrene	4.7	20	< 20 U
120-12-7	Anthracene	5.9	20	< 20 U
84-74-2	Di-n-Butylphthalate	5.3	20	< 20 U
206-44-0	Fluoranthene	4.5	20	< 20 U
129-00-0	Pyrene	5.6	20	< 20 U
85-68-7	Butylbenzylphthalate	8.0	20	< 20 U
56-55-3	Benzo(a)anthracene	5.2	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	29	50	< 50 U
218-01-9	Chrysene	5.2	20	< 20 U
117-84-0	Di-n-Octyl phthalate	8.7	20	< 20 U
50-32-8	Benzo(a)pyrene	6.5	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	6.0	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	6.2	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	5.8	20	< 20 U
TOTBFA	Total Benzofluoranthenes	10	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	80.4%	2-Fluorobiphenyl	80.0%
d14-p-Terphenyl	91.8%	d4-1,2-Dichlorobenzene	81.4%
d5-Phenol	71.5%	2-Fluorophenol	69.6%
2,4,6-Tribromophenol	83.9%	d4-2-Chlorophenol	80.5%

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-062614	80.4%	80.0%	91.8%	81.4%	71.5%	69.6%	83.9%	80.5%	0	
LCS-062614	78.0%	68.6%	80.0%	66.0%	66.9%	64.9%	82.7%	70.1%	0	
LCSD-062614	75.2%	70.4%	81.4%	68.8%	68.3%	66.8%	79.7%	71.2%	0	
1-4 B	67.2%	67.0%	78.2%	63.4%	58.0%	59.2%	72.8%	66.0%	0	

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(30-120)	(30-120)
(FBP) = 2-Fluorobiphenyl	(35-120)	(35-120)
(TPH) = d14-p-Terphenyl	(37-120)	(37-120)
(DCB) = d4-1,2-Dichlorobenzene	(32-120)	(32-120)
(PHL) = d5-Phenol	(29-120)	(29-120)
(2FP) = 2-Fluorophenol	(27-120)	(27-120)
(TBP) = 2,4,6-Tribromophenol	(24-134)	(24-134)
(2CP) = d4-2-Chlorophenol	(31-120)	(31-120)

Prep Method: SW3546
Log Number Range: 14-12631 to 14-12631

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS
Page 1 of 2

Sample ID: LCS-062614
LCS/LCSD

Lab Sample ID: LCS-062614
LIMS ID: 14-12631
Matrix: Soil
Data Release Authorized: *mm*
Reported: 06/30/14

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Sampled: 06/25/14
Date Received: 06/25/14

Date Extracted LCS/LCSD: 06/26/14

Sample Amount LCS: 10.00 g
LCSD: 10.00 g

Date Analyzed LCS: 06/27/14 16:22
LCSD: 06/27/14 16:59

Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Instrument/Analyst LCS: NT10/YZ
LCSD: NT10/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

GPC Cleanup: No

Percent Moisture: NA

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	409	500	81.8%	452	500	90.4%	10.0%
1,4-Dichlorobenzene	371	500	74.2%	383	500	76.6%	3.2%
Benzyl Alcohol	303	500	60.6%	271	500	54.2%	11.1%
1,2-Dichlorobenzene	386	500	77.2%	416	500	83.2%	7.5%
2-Methylphenol	362	500	72.4%	386	500	77.2%	6.4%
4-Methylphenol	731	1000	73.1%	829	1000	82.9%	12.6%
2,4-Dimethylphenol	1160	1500	77.3%	1240	1500	82.7%	6.7%
Benzoic Acid	1680 Q	2750	61.1%	1940 Q	2750	70.5%	14.4%
1,2,4-Trichlorobenzene	424	500	84.8%	439	500	87.8%	3.5%
Naphthalene	362	500	72.4%	362	500	72.4%	0.0%
2-Methylnaphthalene	438	500	87.6%	440	500	88.0%	0.5%
Dimethylphthalate	402	500	80.4%	431	500	86.2%	7.0%
Acenaphthylene	337	500	67.4%	350	500	70.0%	3.8%
Acenaphthene	367	500	73.4%	380	500	76.0%	3.5%
Dibenzofuran	414	500	82.8%	426	500	85.2%	2.9%
Diethylphthalate	432 B	500	86.4%	424 B	500	84.8%	1.9%
Fluorene	378	500	75.6%	395	500	79.0%	4.4%
N-Nitrosodiphenylamine	470	500	94.0%	499	500	99.8%	6.0%
Pentachlorophenol	818 Q	1500	54.5%	820 Q	1500	54.7%	0.2%
Phenanthrene	397	500	79.4%	416	500	83.2%	4.7%
Anthracene	374	500	74.8%	388	500	77.6%	3.7%
Di-n-Butylphthalate	411	500	82.2%	420	500	84.0%	2.2%
Fluoranthene	374	500	74.8%	392	500	78.4%	4.7%
Pyrene	384	500	76.8%	417	500	83.4%	8.2%
Butylbenzylphthalate	389	500	77.8%	407	500	81.4%	4.5%
Benzo(a)anthracene	390	500	78.0%	419	500	83.8%	7.2%
bis(2-Ethylhexyl)phthalate	457	500	91.4%	458	500	91.6%	0.2%
Chrysene	368	500	73.6%	381	500	76.2%	3.5%
Di-n-Octyl phthalate	401	500	80.2%	421	500	84.2%	4.9%
Benzo(a)pyrene	396	500	79.2%	432	500	86.4%	8.7%
Indeno(1,2,3-cd)pyrene	376	500	75.2%	401	500	80.2%	6.4%
Dibenz(a,h)anthracene	234	500	46.8%	243	500	48.6%	3.8%
Benzo(g,h,i)perylene	303	500	60.6%	302	500	60.4%	0.3%
Total Benzofluoranthenes	813	1000	81.3%	861	1000	86.1%	5.7%

Sample ID: LCSD-062614
LCS/LCSD

Lab Sample ID: LCS-062614
LIMS ID: 14-12631
Matrix: Soil

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

Date Analyzed LCS: 06/27/14 16:22
LCSD: 06/27/14 16:59

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
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Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	78.0%	75.2%
2-Fluorobiphenyl	68.6%	70.4%
d14-p-Terphenyl	80.0%	81.4%
d4-1,2-Dichlorobenzene	66.0%	68.8%
d5-Phenol	66.9%	68.3%
2-Fluorophenol	64.9%	66.8%
2,4,6-Tribromophenol	82.7%	79.7%
d4-2-Chlorophenol	70.1%	71.2%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Extraction Method: SW3546

Sample ID: 1-4 B

SAMPLE

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Lab Sample ID: YP55A

LIMS ID: 14-12631

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/30/14

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Date Sampled: 06/25/14

Date Received: 06/25/14

Date Extracted: 06/26/14

Date Analyzed: 06/27/14 18:13

Instrument/Analyst: NT10/YZ

GPC Cleanup: No

Sample Amount: 11.0 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Percent Moisture: 0.4 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz (a,h) anthracene	1.3	4.5	< 4.5 U
106-46-7	1,4-Dichlorobenzene	1.7	4.5	< 4.5 U
120-82-1	1,2,4-Trichlorobenzene	1.4	4.5	< 4.5 U
106-44-5	4-Methylphenol	2.3	4.5	< 4.5 U
131-11-3	Dimethylphthalate	1.1	4.5	< 4.5 U
85-68-7	Butylbenzylphthalate	2.0	4.5	< 4.5 U
95-48-7	2-Methylphenol	1.7	4.5	< 4.5 U
105-67-9	2,4-Dimethylphenol	9.3	23	< 23 U
86-30-6	N-Nitrosodiphenylamine	2.1	4.5	< 4.5 U
100-51-6	Benzyl Alcohol	11	18	< 18 U
87-86-5	Pentachlorophenol	9.4	18	< 18 U
95-50-1	1,2-Dichlorobenzene	1.2	4.5	< 4.5 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	56.3%
d14-p-Terphenyl	77.4%

ORGANICS ANALYSIS DATA SHEET**Semivolatiles by Selected Ion Monitoring GC/MS****Extraction Method: SW3546**


Page 1 of 1

**ANALYTICAL
RESOURCES
INCORPORATED****Sample ID: MB-062614****METHOD BLANK**

Lab Sample ID: MB-062614

LIMS ID: 14-12631

Matrix: Soil

Data Release Authorized: 

Reported: 06/30/14

QC Report No: YP55-CalPortland

Project: Jorgensen Forge

Date Sampled: NA

Date Received: NA

Date Extracted: 06/26/14

Date Analyzed: 06/27/14 15:46

Instrument/Analyst: NT10/YZ

GPC Cleanup: No

Sample Amount: 10.0 g-dry-wt

Final Extract Volume: 1.0 mL

Dilution Factor: 1.00

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	1.4	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.9	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.5	5.0	< 5.0 U
106-44-5	4-Methylphenol	2.5	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.2	5.0	< 5.0 U
85-68-7	Butylbenzylphthalate	2.2	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.9	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	10	25	< 25 U
86-30-6	N-Nitrosodiphenylamine	2.3	5.0	< 5.0 U
100-51-6	Benzyl Alcohol	12	20	< 20 U
87-86-5	Pentachlorophenol	10	20	< 20 U
95-50-1	1,2-Dichlorobenzene	1.3	5.0	< 5.0 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	63.6%
d14-p-Terphenyl	83.8%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: YP55-CalPortland
Project: Jorgensen Forge

<u>Client ID</u>	<u>FPH</u>	<u>TER</u>	<u>TOT OUT</u>
MB-062614	63.6%	83.8%	0
LCS-062614	59.2%	77.8%	0
LCSD-062614	61.1%	81.0%	0
1-4 B	56.3%	77.4%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(FPH) = 2-Fluorophenol	(32-120)	(27-120)
(TER) = d14-p-Terphenyl	(42-124)	(37-120)

Prep Method: SW3546
Log Number Range: 14-12631 to 14-12631

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS
Sample ID: LCS-062614

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-062614

QC Report No: YP55-CalPortland

LIMS ID: 14-12631

Project: Jorgensen Forge

Matrix: Soil

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 06/30/14

Date Received: NA

Date Extracted: 06/26/14

Sample Amount LCS: 10.00 g-dry-wt

LCSD: 10.00 g-dry-wt

Date Analyzed LCS: 06/27/14 16:22

Final Extract Volume LCS: 1.0 mL

LCSD: 06/27/14 16:59

LCSD: 1.0 mL

Instrument/Analyst LCS: NT10/YZ

Dilution Factor LCS: 1.00

LCSD: NT10/YZ

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Dibenz(a,h)anthracene	214	500	42.8%	230	500	46.0%	7.2%
1,4-Dichlorobenzene	354	500	70.8%	371	500	74.2%	4.7%
1,2,4-Trichlorobenzene	364	500	72.8%	379	500	75.8%	4.0%
4-Methylphenol	732 E	1000	73.2%	782 E	1000	78.2%	6.6%
Dimethylphthalate	394	500	78.8%	418	500	83.6%	5.9%
Butylbenzylphthalate	412	500	82.4%	431	500	86.2%	4.5%
2-Methylphenol	350	500	70.0%	374	500	74.8%	6.6%
2,4-Dimethylphenol	1040 E	1500	69.3%	1160 E	1500	77.3%	10.9%
N-Nitrosodiphenylamine	412	500	82.4%	454	500	90.8%	9.7%
Benzyl Alcohol	357	500	71.4%	324	500	64.8%	9.7%
Pentachlorophenol	870 Q	1500	58.0%	904 Q	1500	60.3%	3.8%
1,2-Dichlorobenzene	357	500	71.4%	373	500	74.6%	4.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
2-Fluorophenol	59.2%	61.1%
d14-p-Terphenyl	77.8%	81.0%